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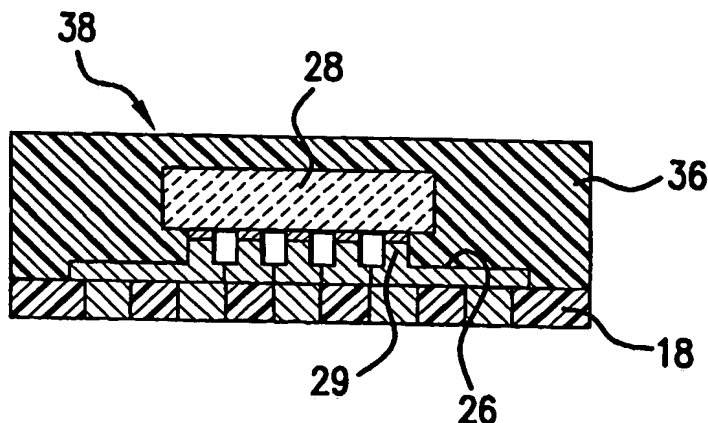
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(54) Title: LEAD FRAME ROUTED CHIP PADS FOR SEMICONDUCTOR PACKAGES



(57) Abstract: A redistributed lead frame for use in molded plastic semiconductor package (38) is formed from an electrically conductive substrate by a sequential metal removal process. The process includes: (a) patterning a first side of an electrically conductive substrate to form an array of lands separated by channels, (b) disposing a first molding compound (18) within these channels, (c) patterning a second side of the electrically conductive substrate to form an array of chip attach sites (24) and routing circuits (26) electrically interconnecting the array of lands and the array of chip attached sites (24), (d) directly electrically interconnecting input/output pads on the at least one semiconductor device (28) to chip attach site members (24) of the array of chip attach sites (24), and (e) encapsulating the at least one

semiconductor device (28), the array of chip attach sites (24) and the routing circuits (26) with a second molding compound (36). This process is particularly suited for the manufacture of chip scale packages and very thin packages.